

ALEKSANDROV, A.S., kandidat sel'skokhozyaystvennykh nauk; VARUMTSYAN, I.S., akademik; GUSHCHIN, B.F., agronom; MEDNIS, M.P., kandidat sel'skokhozyaystvennykh nauk; SOKOLOV, F.A., kandidat sel'skokhozyaystvennykh nauk; LEGOSTAYEV, V.M., kandidat sel'skokhozyaystvennykh nauk; CHUVAKHIN, V.S., entomolog; CHUMANOV, Yakov Ignat'yevich, doktor sel'skokhozyaystvennykh nauk [deceased]; CHELYSHKIN, Yu.G., redaktor; VESKOVA, Ye.I., tekhnicheskij redaktor

[Cotton growing] Khlopkovodstvo. Pod red. IA.I.Chumanova i V.S. Chuvakhina. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1956. 407 p.
(Cotton growing) (MLRA 10:9)

USSR/Technical Crops. Oil Plants. Sugar Plants.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77766.

Author : Sokolov, F.A.

Inst : ~~_____~~

Title : Basis of Schemes of the Square-Nest Planting of
Cotton.

Orig Pub: V sb.: Materialy ob"yedin. nauchn. sessii po khlop-
kovodstvu, T.I. Tashkent, Gosizdat UzSSR, 1958,
493-501.

Abstract: No abstract.

Card : 1/1

109

SOKOLOV, F.A., kand. sel'khoz. nauk; KOKUYEV, V.I., kand. sel'-
khoz. nauk; SHAFRIN, A.N., zasl.agr.Uzb.SSR; KONDRATYUK, V.P.,
kand. sel'khoz. nauk; MALINKIN, N.P., doktor sel'khoz.
nauk; YEREMENKO, V.Ye., doktor sel'khoz. nauk [deceased];
MEDNIS, M.P., kand.biol. nauk; FILIPPENKO, G.I., kand.
sel'khoz. nauk; USPENSKIY, F.M., kand. biol. nauk;
SOLOV'YEVA, A.I., kand. sel'khoz. nauk; PRUGALOV, A.M.,
kand.sel'khoz. nauk [deceased]; ZAKIROV, T.S., kand.
sel'khoz. nauk; FRENKIN, V.M., zasl. mekhanizator UzSSR;
GORELIK, I.M., red.; ABBASOV, T., tekhn. red.

[Cultivation practices in cotton growing] Agrotekhnika
khlochatnika. Tashkent, Gos.izd-vo UzSSR, 1963. 326 p.
(MIRA 17:1)

(Uzbekistan--Cotton growing)

PLATONOV, V.I., kand. ekon. nauk; SOKOLOV F.A., kand. sel'khoz.
nauk; KUCHIYEV, D.; ANASTASOV, A.Kh, red.

[Cotton growing by Dzhavat Kuchiev's team] Vozdelyvanie
khlopchatnika v brigade Dzhavata Kuchieva. Moskva. Kolos,
1965. 150 p. (MIRA 18:10)

IOBROGURSKIY, S.O., professor; SOKOLOV, F.A., dotsent; ZAKHAROVA, Ye.I., dotsent; MARTENS, S.L., redaktor; MODEL', B.I., tekhnicheskii redaktor.

[Mechanisms; a handbook] Mekhanizmy; spravochnoe rukovodstvo.
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1947.
305 p. (MLRA 8:1)
(Mechanical engineering)

25(1)

PHASE I BOOK EXPLOITATION

SOV/2905

Sokolov, Fedor Aleksandrovich, and Pavel Vasil'yevich Usov

Tekhnicheskaya mekhanika (Engineering Mechanics) Moscow, Trudrezervizdat, 1958.
422 p. Errata slip inserted. 75,000 copies printed.

Scientific Ed.: S. O. Dobrogurskiy, Doctor of Technical Sciences, Professor;
Ed.: E. M. Kontsevaya; Tech. Ed.: S. I. Rakov.

PURPOSE: This book is intended as a manual for technical schools training labor reserves.

COVERAGE: The material covered in this book includes theoretical mechanics, the basic elements of machines and mechanisms, and the fundamentals of strength of materials. Some space is devoted to parts and components of general-purpose machinery. Basic concepts of statics, kinematics, and dynamics are explained. The principles of the three ordinary modes of transmission are developed and a limited number of types of mechanisms of each mode are studied and illustrated. There are many graphical constructions and diagrams explaining the fundamentals of mechanical engineering. The text also contains a number of illustrative examples and problems together with their solutions. No personalities are mentioned. There are 21

Card 1/20

AUTHOR: Sokolov, F.A. (Moscow) SOV/24-58-6-21/35
TITLE: The Oscillation of a Free Plate and a Plate on an Elastic Support under the Effect of a Dynamic Load (Kolebaniya svobodnoy plastinki i plastinki na uprugom osnovanii pod deystviyem dinamicheskoy nagruzki)
PERIODICAL: Izvestiya Akademii Nauk SSSR Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 6, pp 114-117 (USSR)
ABSTRACT: In both cases the plate is assumed to be unbounded and the dynamic load to have axial symmetry. In the first problem the load is applied instantaneously and thereafter remains constant and uniformly distributed over a circle. Several special cases are mentioned briefly. These include: 1) rectangular impulse; 2) a uniformly distributed load which varies in an arbitrary manner with time, and 3) an axi-symmetrical load. The discussion of the second problem is similar. As a third case the oscillation of a curved spherical shell under a dynamic load is considered. This is related
Card 1/2

SOV/24-58-6-21/35

The Oscillation of a Free Plate and a Plate on an Elastic Support
under the Effect of a Dynamic Load

to the second problem considered, and so expressions for
the radial displacement of the top of the spherical
shell and the bending moments which act there can be
derived.

There are 3 Soviet references.

SUBMITTED: December 9, 1957

Card 2/2

SOKOLOV, Fedor Aleksandrovich, kand.tekhn.nauk, dotsent; USOV, Pavel
Vasil'yevich, kand.tekhn.nauk, dotsent; MEYNGARD, S.A., red.;
TOKER, A.M., tekhn.red.

[Engineering mechanics] Tekhnicheskaya mekhanika. 2., ispr. i dop.
izd. Moskva, Proftekhizdat, 1962. 462 p.

(MIRA 15:5)

(Mechanical engineering)

(Mechanics)

S/179/62/000/002/012/012

E199/E413

AUTHOR: Sokolov, F.A. (Moscow)

TITLE: Spherical shell under action of an axially symmetric loading

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, no.2, 1962, 150-157

TEXT: This paper deals with open or closed shells. In solving the problem it is assumed that the angle between the edge and the vertical axis is small but the method can be applied to shells with large angles. The equation of a thin shell is

$$\frac{d^2\sigma}{d\beta^2} + \frac{d\sigma}{d\beta} \operatorname{ctg} \beta - \sigma \operatorname{ctg}^2 \beta + 2ik^2\sigma = 0 \quad (1.1)$$

$$\sigma = 0 - 2ik^2 \frac{V_*}{EhR}, \quad k = \sqrt[4]{3\left(1 - \frac{1}{m^2}\right)} \sqrt{\frac{R}{h}}$$

where σ - complex function, k - dimensionless parameter, R - radius, h - thickness, β - angle between the vertical axis
Card 1/3

S/179/62/000/002/012/012
E199/E413

Spherical shell under action ...

and a meridian, β_0 - angle between the vertical axis and the edge.
For small values of β_0 , Eq.(1.1) can be replaced by

$$\frac{d^2\tau}{d\beta^2} + \left(2ik^2 - \frac{3}{4\beta^2}\right)\tau = 0 \quad (\tau = \sigma \sqrt{\sin \beta}) \quad (1.2)$$

Its general solution is given by

$$\begin{aligned} \sigma &= \sigma_1 + \sigma_2 = (A_1 - iB_1)(\chi_1 + i\chi_2) + (A_2 - iB_2)(\chi_3 + i\chi_4) = \\ &= (A_1 - iB_1)k\sqrt{2}\sqrt{\frac{\beta}{\sin \beta}} [\text{ber}'(x) - i\text{bei}'(x)] + \\ &+ (A_2 - iB_2)k\sqrt{2}\sqrt{\frac{\beta}{\sin \beta}} [\text{ker}'(x) - i\text{koi}'(x)] \quad (x = k\beta\sqrt{2}) \end{aligned} \quad (1.3)$$

For an open shell the function σ_2 only is required; for a closed shell only σ_1 is required. From the above, the author derives equations for deflection, meridional and equatorial forces and moments, horizontal and vertical displacements. Information contained in this article is sufficient to allow one
Card 2/3

KCSOV, A.P.; MAGAY, L.I.; NIKULIN, B.K.; PAK, M.S.; RUDAKOV, G.M.;
SAYFI, E.Kh.; SERGIYENKO, V.A.; SOKOLOV, F.A.; SPIRIDONOV,
P.V.; SHPOLYANSKIY, D.M.; TIKHONOVA, I., red.

[Overall mechanization and cultivation practices for cotton
crops] Kompleksnaia mekhanizatsiia i agrotekhnika khlop-
chatnika. Tashkent, Gos.izd-vo Uzbekskoi SSR, 1964. 407 p.
(MIRA 17:11)

1. Sredneaziatskiy institut mekhanizatsii i elektrifikatsii
sel'skogo khozyaystva. 2. Sredneaziatskiy institut mekhani-
zatsii i elektrifikatsii sel'skogo khozyaystva (for all
except Tikhonova).

KOMAR, V.G.; OSKOLKOV, I.N.; SAZHIN, L.I.; SOKOLOV, F.F.

Selenium rectifying equipment for cinematography. Trudy NIKFI no.7:
216-226 '47. (MIRA 11:6)

1. Elektrosilovaya laboratoriya Nauchno-issledovatel'skogo kino-foto-
instituta, Moskva.

(Cinematography—Equipment and supplies)

(Motion-picture projection—Equipment and supplies)

(Electric current rectifiers)

SOKOLOV, F. F.

Cand. Tech. Sci.

Dissertation: "Heat Calculation of Selenium Rectifiers."

30 Jun. 49

All-Union Sci. Res. Inst. of Cinematography, Ministry of
Cinematography USSR

SO Vecheryaya Moskva
Sum 71

Sokolov, F. F.
USSR Electricity - Selenium Rectifiers

Mar 53

"Operating Experience with Selenium Rectifiers" F. F. Sokolov, Cand Tech Sci

Sci Res Cine-Photo Inst

Elektrichestvo, No 3, pp 69-72

Examines fluctuation of losses in ^Kdis^s of Se rectifier when individual elements are shorted out and ~~contacts destroyed~~. Mentions rectifier VS-7 and unit developed by author's inst using ^Kdis^s with central insulation, rigid contacts, and no non-ferrous metal content. Submitted 1 Sep 1953.

IL'IN, V.; SOKOLOV, F.

New scheme of selenium rectifier bridges used in the VS-60A rectifiers.
Kinomekhanik no.4:18-22 Ap '53. (MLRA 6:6)

(Electric current rectifiers)

OSKOLOV, Il'ya Nikolayevich; SOKOLOV, Fedor Fedorovich; YAKOBSON, A.Kh.
redaktor; KARANDASHOV, S.A., redaktor; CHICHERIN, A.N., tekhnicheskiy redaktor.

[Selenium rectifiers] Selenovye vypriamiteli. Moskva, Gos.isd-vo
"Iskusstvo," 1955. 95 p. (MLRA 8:11)
(Electric current rectifiers)

SOKOLOV, F.F., kand.tekhn.nauk.

Heat release from rectifier stacks consisting of large selenium elements. Elektrichestvo no.1:58-63 Ja '58. (MIRA 11:2)

1.Nauchno-issledovatel'skiy kino-fotoinstitut.
(Electric current rectifiers)
(Heat--Transmission)

Sokolov, F.F.

110-2-20/22

AUTHOR: Sokolov, F.F. (Cand.Tech.Sci.)

TITLE: The rated power of a.c. voltage stabilisers. (Raschetnaya moshchnost' stabilizatorov napryazheniya peremennogo toka.)

PERIODICAL: Vestnik Elektromyshlennosti, 1958, No.2, pp.72-76 (USSR)

ABSTRACT: The extensive use of voltage stabilisers necessitates a rational basis for comparing their properties. The most important technical characteristics of voltage stabilisers are listed. The merits of different stabilisers in respect of size and weight must be related to unit output, combined with the range of output voltage and ratio of input to output voltage. Stabilisers usually contain the main elements of an automatic control system, namely, a measuring device, an amplifier, an operating device and a stabilising device. It is assumed that the rated power of a stabiliser is mainly governed by the operating device. Stabilisers may be considered as transformers of variable ratio and can be compared on this basis: a method is derived and the various design factors that govern the rated output are considered. By way of example, the main technical data of a number of Soviet and foreign stabilisers are tabulated and compared. Although the tabulated data are not specially accurate, certain conclusions can nevertheless be drawn. Of the various stabilisers compared, those of the ferro-resonance type are of low efficiency, those with various kinds of saturating choke are much more economical, and stabilisers with the least weight per unit power

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110-2-20/22

The rated power of a.c. voltage stabilisers.

are those most resembling a variable ratio auto-transformer circuit. Two of this latter type make particularly effective use of the materials. The conclusions relate specifically to single-phase stabilisers, but they are also applicable to three-phase systems. They may also be developed for stabilisers with d.c. output, and to current stabilisers. There are 4 figures, 1 table, 7 literature references (4 Russian, 3 English)

SUBMITTED: June, 5th, 1957.

ASSOCIATION: All-Union Scientific Research Motion-picture Institute (Vsesoyuznyy nauchno-issledovatel'skiy kinefotoinstitut.) /

AVAILABLE: Library of Congress.

Card 2/2

SOKOLOV, Fedor Grigor'yevich

SOKOLOV, Fedor Grigor'yevich; PAUL', V.P., inzhener, redaktor; VERINA, G.P.,
tekhnicheskii redaktor

[Building of railroad structures] Stroitel'stvo zheleznodorozhnykh
zdanii. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 339 p.

(MLRA 10:9)

(Railroads--Buildings and structures)

BARANOV, V.N., inzh.; SOKOLOV, F.G., inzh., red.; JOBSHITS, M.L., inzh., red.;
BOBROVA, Ye. N., tekhn. red.

[Mass construction of apartment houses; practices of Kirov railroad
workers] Massovoe stroitel'stvo zhilykh domov; opyt kollektiva
Kirovskoi dorogi. Moskva, Gos. transp. zhel.-dor. izd-vo, 1958. 72 p.
(MIRA 11:12)

(Apartment houses)

5040406 1.6.
VICHKREVIN, Aleksandr Yefimovich; SOKOLOV, Fedor Grigor'iyevich; GOL'SHUKH,
V.V., inzh., red.; KHITROV, P.A., tekhn. red.

[Construction and track structures] Stroitel'noe proizvodstvo i
putevye zdaniia. Moskva, Gos. transp. zhel-dor. izd-vo. 1958.
245 p. (MIRA 11:7)

(Railroads—Construction)

MATVEYEV, Nikolay Ivanovich, dotsent, kand.tekhn.nauk; NEPRINTSEV, Mikhail Nikolayevich, dotsent, zasluzhennyy deyatel' nauki i tekhniki; PERSIANOV, Moisey Artem'yevich, dotsent, kand.tekhn.nauk; SOKOLOV, F.G., inzh., retsenzent; PAUL', V.P., inzh., red.; VERINA, G.P., tekhn.red.

[Principles of construction in railroad transportation] Osnovy stroitel'nogo dela na zheleznodorozhnom transporte. Moskva, Gos.transp.zhel-dor.izd-vo. Pt.2. [Construction operations and buildings] Stroitel'nye raboty i zdaniia. 1959. 311 p.
(MIRA 12:9)

(Building)

(Railroads--Buildings and structures)

SOKOLOV, F.G.

Improve the quality of railroad construction to meet modern demands.
Transp.stroi. 9 no.6:41-44 Je '59. (MIRA 12:11)

1. Glavnyy inzhener Glavnogo upravleniya kapital'nogo stroitel'stva
Ministerstva putey soobshcheniya.
(Railroads--Construction)

LEBEDEV, Mikhail Nikolayevich, prof.; SHADRIN, Nikolay Aleksandrovich, prof.; KRYUKOV, Georgiy Nikolayevich, dotsent; MOLLOT, Aleksandr Georgiyevich, dotsent; PETRUKOVICH, A.A., inzh.; PAL'CHUN, P.S., inzh., retsenzent; SOKOLOV, F.G., inzh., retsenzent; EYGEL', I.Yu., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Railroad surveying and construction] Izyskaniia i postroiika zheleznykh dorog. By M.N.Lebedev i dr. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia. Pt.2. [Railroad construction] Postroiika zheleznykh dorog. 1961. 319 p. (MIRA 14:8)
(Railroads--Construction)

KANEVSKIY, A.G., inzh.; MATROSOV, M.A., inzh.; SOKOLOV, F.G.} inzh.

Let's raise the quality of construction in every way. Transp.stroi.
11 no.4:13-15 Ap '61. (MIRA 14:5)
(Construction industry)

SOKOLOV, F.G.

Great potentialities for lowering the costs and increasing the quality of
railroad electrification. Zhel. dor. transp. 43 no. 7:12-18 J1 '61.
(MIRA 14:7)

1. Glavnyy inzhener Glavnogo upravleniya kapital'nogo stroitel'stva
Ministerstva putey soobshcheniya.
(Railroads—Electrification)

SOKOLOV, F.G.

Increase of the efficiency of capital investments is a matter of exceptional importance. Zhel.dor.transp. 45 no.9:56-60 S '63.
(MIRA 16:9)

1. Glavnyy inzh. Glavnogo upravleniya kapital'nogo stroitel'stva Ministerstva putey soobshcheniya.
(Railroads—Finance)

VICHEREVIN, Aleksandr Yefimovich; SOKOLOV, Fedor Grigor'yevich;
GRINEVSKIY, I.A., nauchn. red.; MIKHAL'CHUK, Z.V., red.

[Construction of railroad tracks] Stroitel'stvo zheleznno-
dorozhnogo puti. Moskva, Vysshaya shkola, 1965. 282 p.
(MIRA 18:12)

KARTAMYSHEV, A.I.; SOKOLOV, F.M.; ASTVATSATUROV, K.R., dots., red.

[Atlas of histomorphological elements in dermatovenereology]
Atlas gistomorfologicheskikh elementov v dermato-venerologii.
Moskva, TSentr. in-t usovershenstvovaniia vrachei, 1964. 64 p.
(MIRA 18:3)

SOKOLOV, F.M.

[The use of wax in medicine] Voskovye raboty v meditsine.
Moskva, Medgiz, 1955. 100 p. (MIRA 8:7)
(Waxes)

SOKOLOV, Fedor Mikhaylovich; LYUBIMOV, Anatoliy Nikolayevich; STARCHAKOVA,
I.I., red.; SOKOLOVA, N.N., tekhn. red.

[Commercial and financial plan for food stores; management planning]
Torgovo-finansovyi plan prodovol'stvennogo magazina; planirovanie
khoziaistvennoi deiatel'nosti. Moskva, Gos. izd-vo torg. lit-ry,
1958. 173 p. (MIRA 11:7)

(Food industry)

LINETSKIY, Yefim Yakovlevich; LELEKOV, A.F.; SOKOLOV, F.M.

[The economics and planning of Soviet commerce] Ekonomika i
planirovanie sovetskoi trgovli. Rekomendovano v kachestve
uchebnika dlia tekhnikumov sovetskoi trgovli. Moskva,
Gostorgizdat, 1962. 242 p. (MIRA 15:12)
(Russia--Commerce)

VOINOV, A.N.; GEORGEV, L.I.; SOKOLOV, P.P.

Delay in the adiabatic compression-induced ignition of hydrocarbon-air mixtures as a function of temperature and pressure.

Kin. i kat. 5 no.3:388-398 My-Je '64.

(MIRA 17:11)

1. Institut khimicheskoy fiziki AN SSSR i Moskovskiy avtomobil'no-dorozhnyy institut.

SOKOLOV, F. P., CAND AGR SCI, "VARIATION IN THE FAT
PHASE OF MILK ^{as a function of} ~~IN-RELATION-TO~~ THE QUANTITY OF PROTEIN
AND NITROGEN-FREE EXTRACTIVE SUBSTANCES IN THE FEED."
KHAR'KOV, 1959. (MIN OF AGR UKSSR, KHAR'KOV ZOOTECH
INST). (KL, 3-61, 226).

L 8734-65 AEDC(a)

ACCESSION NR: AP4041060

8/0195/64/005/003/0388/0398

AUTHOR: Voinov, A. N.; Skorodelov, D. I.; Sokolov, F. P.

TITLE: Relationship of the delay in ignition of hydrocarbon-air mixtures during adiabatic compression to temperature and pressure

SOURCE: Kinetika i kataliz, v. 5, no. 3, 1964, 388-398

TOPIC TAGS: ignition delay, hydrocarbon air mixture, adiabatic compression, ignition zone, cold flame zone, preignition process, hot flame formation, engine knock

ABSTRACT: The effect of the temperature and pressure of adiabatic compression on the duration of the delay in ignition of mixtures of 60% isooctane with 40% n-heptane in stoichiometric proportions with air was investigated at temperatures to 1000C and pressures to 20 absolute atmospheres. Data was obtained on the apparatus shown in Fig. 1 which registered the changes in the times of a given intensity of illumination from a cold flame as received by the photocathode. The appearance of a hot flame is noted by the oscillograph beam leaving the limits of the screen. At low temperatures and pressures ignition proceeds in one stage, but in the

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I. 8734-65

ACCESSION NR: AP4041060

temperature range of about 375 to 525°C a preignition process stage precedes the cold flame. Fig. 2 summarizes the relationship between the delays (τ_1 = first delay period to maximum intensity of cold flame, τ_2 = second delay until the formation of hot flame, τ_x = total delay) and the compression temperature at different pressures. The ignition zone is to the left of the heavy lines; the limits of the cold flame zone are shown by the dotted lines. The 2-stage preignition process and zones in which the temperature coefficient is negative or zero are observed far in the depth of the ignition zone at pressures above 20 abs. atm. The form of the ignition zone boundary is associated with the character of the change of the duration of delays inside the zone. Plotting the total delays on P-T coordinates gives reverse-S shaped curves which are more pronounced at lower pressures. Curve I was drawn joining the maxima of τ_2 at different pressures; curve II joins the minima of the total time lags τ_x , and III, the minimum of the delays τ_2 , limiting the 2-stage ignition from the low temperature side. It was concluded that 3 successive competing reactions, each playing a leading role in determined temperature zones, take part in the development of the preignition process. One reaction precedes the cold flame, one develops after the cold flame ignition and has a negative temperature coefficient and the third is at higher temperatures and has high activation energy values. The top of the 2-stage

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L 8734-65
ACCESSION NR: AF4041060

ignition is where the rate of the third reaction exceeds that of the second. Based on this work, the anomalous "knock" in gasoline engines at higher temperatures is explained by the longer delay in ignition with increasing temperature. Orig. art. has: 7 figures.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AN SSSR), Moskovskiy avtomobil'nodorozhnyy institut (Moscow Automobile Highway Institute)

SUBMITTED: 10-1-62

ENCL: 02

SUB CODE: GP, FP

NO REF SOV: 004

OTHER: 003

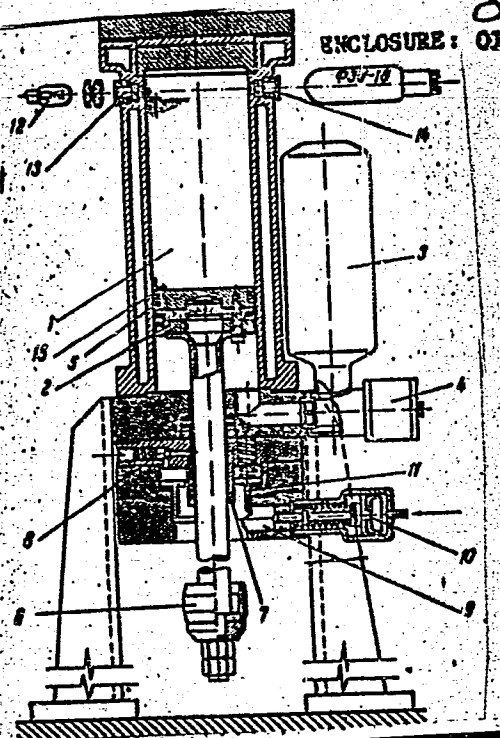
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L 8734-65

ACCESSION NR: AP4041060

Fig. 1. Arrangement of adiabatic compression apparatus

- 1--vertical cylinder
- 2--piston
- 3--receiver
- 4--high speed electromagnetic valve
- 5--cast iron piston rings
- 6--steel housing
- 7--bushing
- 8--reducing valves (for lubrication)
- 9--steel bars
- 10--piston (compressed air)
- 11--expansion ring
- 12--lamp
- 13--quartz window
- 14--window to cathode photomultiplier
- 15--deflector



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L 8734-65

ACCESSION NR: AP4041060

ENCLOSURE: 02

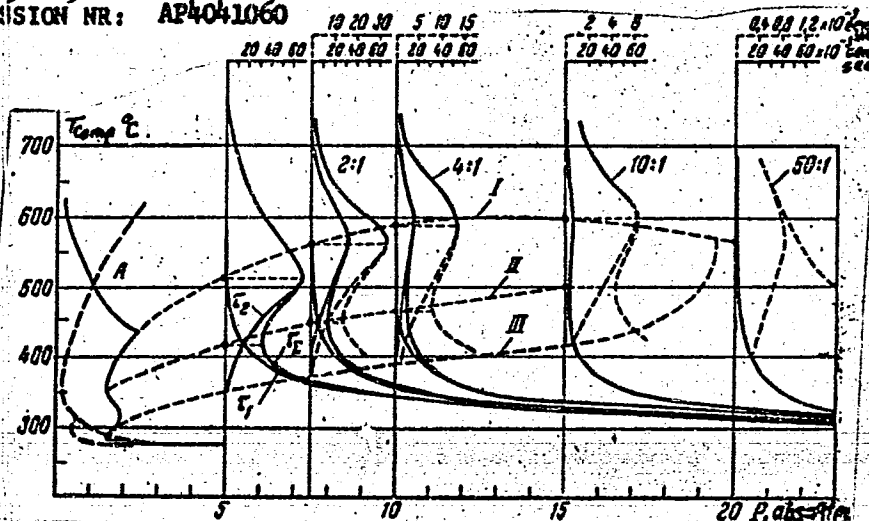


Fig. 2. Comparison of changes in τ_1 , τ_2 , and τ_E depending on T_{comp} at different P_{comp} with characteristic boundaries of the ignition zone.

Card

5/5

SOKOLOV, F. S.

SOKOLOV, F. S. -- "Variation in the Content of Vitamins A and C in the Processing and Storage of Condensed Milk." Latvian Agricultural Academy, 1954 (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Izvestiya Ak. Nauk Latvviyskov. SSR., No. 9, Sept., 1955

DYATLEV, V.N.; SOKOLOV, F.S.; TUNKOV, V.P., inzhener, retsenzent; KRYLOV, V.I. inzhener, redaktor; ADRIANOVA, V.P., inzhener, redaktor; POPOVA, S.M. tekhnicheskiiy redaktor.

[Repairing flaws in steel and nonferrous castings] Ispravlenie porokov stal'nogo i tsvetnogo lit'ia. Moskva, Gos. nauchno-tekhn izd-vo mashinostroit. lit-ry, 1955. 131 p. (MLRA 8:8)
(Founding)

SOKOLOV, F.S.

Technology of semipermanent mold casting. Lit.proizv. no.11:43
N '61. (MIRA 14:10)
(Molding (Founding))

MAZHEYKA, I.[Mazeika, I.]; AVOTA, L.; SOKOLOV, G.; GILLER, S.

Distribution of electron density in heterocyclic systems with
two adjacent nitrogen atoms. Part 1: Dipole moments of some
pyridazine derivatives. Zhur. ob. khim. 34 no.10:3380-3385
O '64. (MIRA 17:11)

1. Institut organicheskogo sinteza AN Latvyskoy SSR.

SMIRNOV, V.I., glav. red.; ZAKHAROV, Ye.Ye., red.; MAGAK'YAN, I.G.,
red.; SOKOLOV, G.A., red.; YAKOVLEV, G.F., red.

[Problems of ore genesis] Problemy genezisa rud. Moskva,
Nedra, 1964. 384 p. (Its Doklady sovetskikh geologov,
Problema 5) (MIRA 17:8)

1. International Geological Congress. 22d, 1964.

SYROYECHKOVSKIY, Ye.Ye.; SOKOLOV, G.A.; SHTIL'MARK, F.R.

Effect of the methods of utilizing hunting grounds on some changes in the Siberian fauna and problems in the reclamation of the commercial resources of taiga. Zool.shur. 4, no.10: 1459-1468 0 '62. (MIRA 15:12)

1. Institute of Geography, Academy of Sciences of the U.S.S.R., Moscow and Institute of Forest and Wood, Siberian Branch of the Academy of Sciences of the U.S.S.R., Krasnoyarsk. (Siberia--Game and game birds)

SOKOLOV, German Abramovich; OLINSKIY, M.Ya., red.; FISENKO, A.T.,
tekhn. red.

[Man adorns the earth; travel notes] Chelovek ukrashaet
zemliu; putevye ocherki. Simferopol', Krymizdat, 1961. 230 p.
(MIRA 15:11)
(Crimea--Description and travel)

ZHURBINSKIY, F.B.; SOKOLOV, G.A.

Device for drilling holes. Vod.i san.tekh. no.8:32-33
Ag '60. (MIRA 13:7)

(Drilling and boring machinery)

SOLOLOV, G.

Electrolyzer for methoxylation of furans. Vestis Latv ak no.1:67-69
'61.

1. Institut organicheskogo sinteza AN Latvyskoy SSR.

CHERNYSHEV, A.M.; GESS, B.A.; KANAVETS, P.I.; MELENT'YEV, P.N.;
KHODAK, L.Z.; SOKOLOV, G.A.; BORISOV, Yu.I.; CHERNYKH, V.I.;
Prinimali uchastiye: VAVILOV, N.S.; MAKARCHENKO, V.G.;
KISELEV, G.P.; VOLNISTOVA, R.A.; MOREYEVA, G.P.

Testing granules made by the method of chemical catalysis
in a laboratory shaft furnace. Trudy IGI 22:70-78 '63.
(MIRA 16:11)

STRIZHBIKOV, V.A.; SOKOLOV, G.A.

Drying the interiors of rooms under winter conditions. Nov. tekhn. i
pered. op. v stroi. 19 no.9:5-7 S '57. (MIRA 10:11)
(Plastering--Cold weather conditions)

308010V, G.A.s inst.

operation of deep vacuum ventilation equipment. Sudostroenie 27
of 1957-58 Ap '61. (HFA 14:3)
vacuum apparatus) (Ships--Heating and ventilation)

SOKOLOV, G.A.

Trauma in the Arctic settlements of Tiksi and Dikson, Ortop.
travm. i protez 19 no.4:41-43 JI-Ag '58 (MIRA 11:11)

1. Iz travmatologicheskogo otdeleniya klinicheskoy ordena
Lenina bol'nitsy imeni S.P. Botkina (glavnyy vrach - prof.
A.N. Shabanov).

(WOUNDS AND INJURIES, statist.
in Russia

SOKOLOV, G. A., Candidate Med Sci (diss) -- "The course of certain injuries and their treatment among the inhabitants of the arctic settlements Tiksi and Dikson". Moscow, 1959. 14 pp (Min Health USSR, Central Inst for the Advanced Training of Physicians), 200 copies (KL, No 26, 1959, 128)

SOLOV, G.A., assistant

Right and left arches of the aorta. Sbor.nauch.trud.Vin.
der.med.inst. 18 no.1:174-177 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk,
prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo
instituta.

(AORTA)

SOKOLOV, G.A., assistant; KOLOTOVA, N.N., doktor med.nauk

Case of a peculiar heart anomaly. Sbor.nauch.trud.Vin.der.med.
inst. 18 no.2:103-109 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk
prof. V.G. Ukrainskiy) i kafedra gospi'tal'noy terapii (zav.
kafedroy doktor med.nauk N.N. Kolotova) Vinnitskogo gosudarst-
vennogo meditsinskogo instituta.

(HEART--ABNORMALITIES AND DEFORMITIES)

SOKOLOV, G.A., assistant

Changes in form of the aortic arches and the nature of branching
of the arch vessels in man in ontogenesis. Sbor.nauch.trud.Vin.
der.med.inst. 18 no.2:141-147 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk,
prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo
instituta.

(AORTA)

SOKOLOV, G.A.; ZUYEV, I.M.; KLIMASHIN, P.S.

Siphon device for draining liquid slag from the ladle.

Metallurg 10 no.1:19-22 Ja '65.

(MIRA 18:4)

1. Moskovskiy institut stali i splavov i Novolipetskiy metal-
lurgicheskiy zavod.

SOKOLOV, O.A.; GUL'TYAY, I.I.

Ways of changing the composition of final blast furnace slags.
Stal' 25 no.12:1069-1074 D '65. (MIRA 18:12)

1. Institut metallurgii im. A.A. Baykova, Moskva.

PROCESSING AND PROPERTIES INDEX

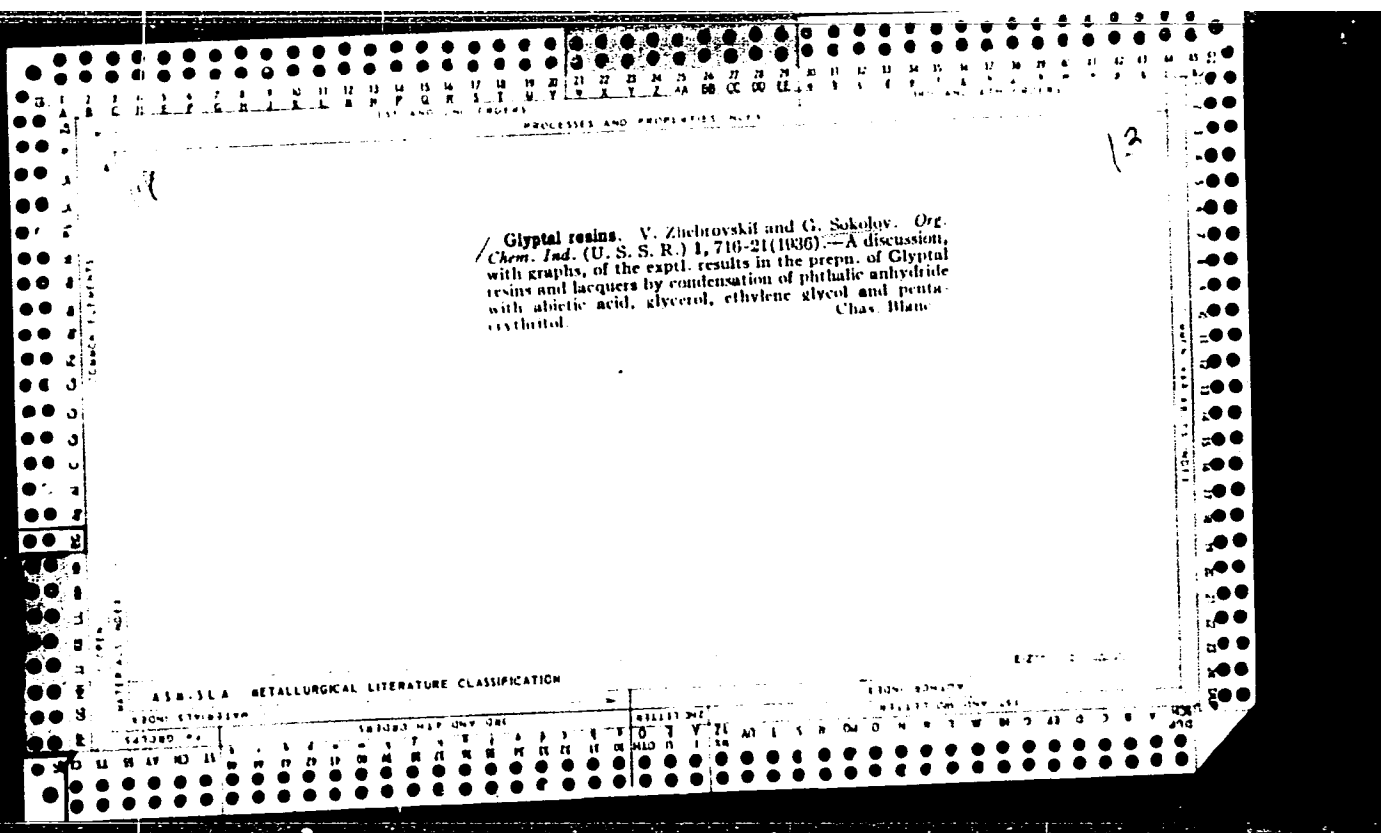
ca

The capacity of crystallisation of green sirups treated by activated carbon, sulfur dioxide and carbon dioxide. I. I. DOKHLENKO AND G. A. SOKOLOV. *Zhurnal Tekhnicheskoi Prom.* 3, 20 31(1920).—The velocity of crystn. of green sirups. treated by $\text{CaO} + \text{CO}_2$ and $\text{CaO} + \text{SO}_2$ in amt. of 3% in soln. or 0% on sugar, is much higher than when treated with Norit (2% on sugar). Ash removal is 5 times greater and Ca salts removal is 2 times higher but on the other hand the surface tension is decreased by Norit to a much greater extent.

V. R. BAIKOV

3

ASH 31.4 METALLURGICAL LITERATURE CLASSIFICATION



28

Analysis of beet-sugar products by the dilution method.
G. A. Sokolov. *Sukhar* 16, No. 3, 7 (1938); *Chimie & Industrie* 41, 860. — In analyzing solns. diid. 1:1 refractometrically, the results for "Brix are too low and for purity too high. The error increases with the degree of purity. In order to avoid it as much as possible the soln. should be placed under vacuum before detg. "Brix so as to remove air bubbles. A. Papineau-Couture

ASB S.E.A. METALLURGICAL LITERATURE CLASSIFICATION

[illegible]

28

Ca

Processes and Properties Index

The carbide method for accurate and quick determination of moisture in refined sugar. G. A. Sukplov. Sakhar 1940, No. 10-11, 7-12.—A complete description is given of the method, construction and use of app., formulas and tables. V. E. Baikow

ASS-51.4 METALLURGICAL LITERATURE CLASSIFICATION

STANDARD MAP ONE

STANDARD MAP ONE

STANDARD MAP ONE

SOKOLOV, G. A.

19975 SOKOLOV, G. A. O ratsional'nom ustroystve ulfeteraspredelitelya. Sakhar.
prom-st', 1949, No. 6, s. 27-29.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

SOKOLOV, G.A.; GOPAK, A.K.; SOKOLOVA, Ya.G.

Process control of massecuite cooking by means of a brasmoscope.
Sakh. prom. 34 no. 12:28-34 D '60. (MIRA 13:12)

1. Smelyanskoye Spetsial'noye konstruktorskoye byuro Tsentral'-
nogo nauchno-issledovatel'skogo instituta sakharnoy promyshlennosti
(for Sokolov). 2. Shpolyanskaya gruppovaya laboratoriya (for
Gopak). 3. Smelyanskiy sakharnyy zavod (for Sokolova).
(Sugar manufacture)

SOLOLOV, G.A.; PAVLYUK, S.F.

Apparatus for separating impurities heavier than water in a
hydraulic transporter. Sakh. prom. 35 no.8:42-45 Ag '61.
(MIRA 14:8)

1. Smelyanskoye spetsial'noye konstruktorskoye byuro
TSentral'nogo nauchno-issledovatel'skogo instituta sakharnoy
promyshlennosti.

(Sugar beets--Cleaning)

Dec 52

SOKOLOV, G.
USSR/Electronics - Television

Scanning Circuits

"Economical Line Scanning" G. Sokolov

"Radio", No 12, pp 31-32

The scanning circuits require 60% of the power drawn by a ^{TV} television receiver; moreover, large-screen sets require 320-400 v for the plate supply of the scanning circuits while the rest of the tubes require 250-300 v. Describes a circuit in which the high voltage of 12-13 kv for scanning is obtained with a plate supply of 290-300 v.

SOKOLOV, G.

Frame control with a transformer output. Radio no.8:33-35 Ag '54.
(Television--Receivers and reception) (MLRA 7:8)

SOKOLOV, G.

USSR/ Electronics - Television scanners

Card 1/1 Pub. 89 - 13/21

Authors : Sokolov, G.

Title : Line scanning

Periodical : Radio 7, 33 - 35, Jul 1955

Abstract : General description is given of a line scanner which, at an anode voltage of 180 v, requires a current of 60 - 65 milliamp to obtain an image on a 31LK2B kinescope screen the dimensions of which in the horizontal line, exceed the diameter of the screen. In this case the voltage on the kinescope anode reaches 11-12 kv. The scanner described possesses all the advantages of oscillators with outside excitation even though it does not have an individual master oscillator. The anode current necessary for the operation of the scanner is produced by a special tube generator the electrodes of which are: a cathode and the controlling and screening grids of the very same tube. Diagrams; drawings.

Institution :

Submitted :

SOKOLOV, G.; SUDRAVSKIY, D.; PETROPAVLOVSKIY, V.

Focusing system with magnetic centering. Radio no.12:42 D '55.
(Television--Picture tubes) (MIRA 9:4)

AID P - 4939

Subject : USSR/Electronics
Card 1/1 Pub. 89 - 6/18
Author : Sokolov, G.
Title : A simple receiver of video signals
Periodical : Radio, 8, 27-29, Ag 1956
Abstract : The author describes a simple receiver of video signals for an amateur television receiver. In addition to a detailed connection diagram, he gives information about the building of certain components, their assembly, and the tuning of the receiver. Five drawings.
Institution : None
Submitted : No date

SOKOLOV, G.; SUDRAVSKIY, D.

Television receiver for amateurs. Radio no. 11:34-38 N '56.
(Television--Receivers and reception) (MLBA 9:12)

107-57-3-38/64

AUTHOR: Sokolov, G. , and Sudravskiy, D.

TITLE: A Deflecting System for an Amateur TV Set
(Otklonyayushchaya sistema dlya lyubitel'skogo televizora)

PERIODICAL: Radio, 1957, Nr 3, pp 35-37 (USSR)

ABSTRACT: A simple deflecting system, suitable for Soviet kinescopes 35LK-2B, 43LK-2B, and 53LK-2B, is described in the article. The system is claimed to guarantee geometrical distortion under 2% and a negligible line ripple. Horizontal and vertical deflecting coils are mounted on a pressboard cylinder which is slipped over the neck of the kinescope. For purposes of adjustment, the cylinder can be moved around the axis of the kinescope. A detailed drawing of the coil-bearing cylinder is given. A coil-form drawing and coil-winding data are presented. By connecting pairs of coils in series or in parallel, the deflecting system can be used with various kinescopes and sweep generators. Connected in series, the horizontal deflecting coils have inductance of 37-40 mH and resistance of 50 ohms; the vertical deflecting coils have inductance of 50-55 mH and resistance of 40 ohms. Remedies against rhombic, trapezoidal,

Card 1/2

107-57-3-38/64

A Deflecting System for an Amateur TV Set

pillow, and barrel distortion are recommended.

There are four figures and one Soviet reference in the article.

Card 2/2

SOKOLOV, G.A., starshiy elektromekhanik

We need a good book on shortwave communications ("High-frequency telephone apparatus" by K.A.Krivitskii and others).
Reviewed by G.A.Sokolov. Avtom., telem.i sviaz' 4 no.6:47
Je '60. (MIRA 13:7)

1. Voronezhskaya distantziya signalizatsii i svyazi Yugo-Vostochnoy dorogi.
(Radio, Shortwave)

(Krivitskiy, K.A.) (Paderno, I.P.) (Pogodin, A.M.)

SOKOLOV, G., inzh.; SUDRAVSKIY, D., inzh.

"TSvet-1" amateur television receiver. Radio no. 10:41-44 0 '61.
(MIRA 14:10)

(Color television)

SOKOLOV, G., inzh.; SUDRAVSKIY, D., inzh.

"TSvet-1" television receiver. Radio no.12:25-32 D '61.
(MIRA 14:12)

(Color television)

SOKOLOV, G.

Automatic MRM-54P marker radio beacon. Mor. flot 21 no.4:20-23
Ap '61. (MIRA 14:4)

1. Nachal'nik Tsentral'nogo proyektno-konstruktorskogo byuro No.4.
(Radio beacons) (Radio in navigation)

SOKOLOV, G.A.

Some problems concerning the construction and use of a radio relay line.
Autom., telem. i svyaz' 6 no.7:39-40 JI '62. (MIRA 16:2)

1. Inzhener-inspektor radioreleynoy svyazi sluzhby signalizatsii i
svyazi Yugo-Vostochnoy dorogi.
(Railroads-Communication systems) (Radio relay systems)

SOKOLOV, G.A.

Efficient power supply for radio relay apparatus. Avtom.,
telem. i sviaz' 7 no.6:23-24 Je '63. (MIRA 17:3)

1. Inzhener-inspektor radioreleynoy svyazi Yugo-Vostochnoy
dorogi.

SOKOLOV, G.A., aspirant

Interference rejection of STM-M apparatus operating in radio
relav channels. Avtom., telem. i sviaz' 9 no.11:26-28 N '65.
(MIRA 18:12)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo
transporta.

L 27840-56

ACC NR: AP6000555

SOURCE CODE: UR/0109/65/010/012/2099/2104

AUTHOR: Sokolov, G. A.

ORG: none

TITLE: Anomalous errors in measuring range and speed in coherent-pulse systems with periodic modulation

SOURCE: Radiotekhnika i elektronika, v. 10, no. 12, 1965, 2099-2104

TOPIC TAGS: radar, coherent radar, pulsed radar

ABSTRACT: Based on recent works of F. M. Woodward and E. J. Kelly, the errors in measuring range and speed which are caused by the multivalence of the likelihood function are analyzed. The "anomalous" errors are due to incorrect selection of the function value; the "blind speed" problem, in speed-selection systems, is one class of anomalous errors. It is proven that compression or expansion of the pulse sequence has an important effect on the probability of occurrence of anomalous errors. The probability is given by: $P = 1 - \Phi(\pi / \sigma_\beta T_n)$, where σ_β is the mean-square spread of positions of maximum on the β -axis, $\Phi(x)$ is the probability

Card 1/2

UDC: 621.396.964.3 621.391.164.6

L 27840-66

ACC NR: AP6000555

integral. The dispersions of the envelope-maximum coordinates are given by:
 where M_2 and m_2 correspond to the duration of a single
 signal and the entire packet, respectively. Other
 symbols and interpretations are taken from E. J.
 Kelly's article. Orig. art. has: 32 formulas.

$$\sigma_r^2 = \frac{N_0}{2E} \frac{1}{\omega_2^2 - \frac{\Delta_1}{M_2 + m_2(\omega_2^2/\omega_0^2)}}$$

$$\sigma_\beta^2 = \frac{N_0}{2E} \frac{1}{M_2 - \frac{\Delta_1}{\omega_2^2} + m_2(\omega_2^2/\omega_0^2)}$$

SUB CODE: 17 / SUBM DATE: 02Aug63 / ORIG REF: 003 / OTH REF: 001

Card

2/2

75

SOKOLOV, B.

("Planning capital construction," B.M.Smekhev; "Reducing the cost of
construction work." M.E.Shass. Reviewed by B.Sokolov). Vop.ekon.no.7:
141-145 J1 '56. (Construction industry) (MLRA 9:9)
(Smekhev, B.M.)(Shass, M.E.)

с. 10-11, 12.

SOKCLOV, B.; FAKTOROVICH, Yu.

Development and improvement of agencies for the management of
construction work. Vop.ekon. no.5:19-28 My '57. (MLRA 10:7)
(Construction industry)

105 0406 15.01.
SHASS, Modest Yevgen'yevich, kand.ekon.nauk; VARENIK, Ye.I., doktor tekhn.
nauk, prof., retsenzent; GIROVSKIY, V.F., kand.ekon.nauk, dots.,
retsenzent; GUREVICH, M.S., ekonomist, retsenzent; SOKOLOV, B.M.,
doktor ekon.nauk, prof., retsenzent; IL'IN, V.M., inzh., nauchnyy
red.; KUTSENOVA, A.A., red.izd-va; PERSON, M.N., tekhn.red.

[Economics of the Soviet construction industry] ~~Ekonomika~~
stroitel'noi promyshlennosti SSSR. Moskva, Gos. izd-vo lit-ry po
stroit. i arkhitekt., 1958. 439 p. (MIRA 11:4)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR
(for Varenik)
(Construction industry)

SOKOLOV, B.

Reducing the volume of unfinished construction is a primary task
in the national economy. Vop.ekon. no.11:36-47 N '58.
(Construction industry) (MIRA 11:11)

KUDRYAVTSEV, Afanasiy Stepanovich, prof.; SOKOLOV, B.M., prof., retsenzents;
MECHEV, S.P., dotsent, retsenzents; IONAS, Boris Yakovlevich, dotsent,
kand.ekonom.nauk, nauchnyy; red.; ZUBKOVA, M.S., red.izd-va; DONSKAYA,
G.D., tekhn.red.

[Road construction economics in the U.S.S.R.] Ekonomika dorozhnogo
stroitel'stva v SSSR. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'-
nogo transporta i shosseinykh dorog RSFSR, 1959. 243 p.

(MIRA 13:6)

(Road construction)

SOKOLOV, B.M., B.M., prof., doktor ekon.nauk, otv.red.; LEVIN, G.I., kand.
ekon.nauk, red.; VAYNSHTEYN, B.S., red.; BIRMAN, I.Ya., red.

[Problems in the economic effectiveness of capital investments
and of new techniques in building] Voprosy ekonomicheskoi efek-
tivnosti kapital'nykh vlozhenii i novoi tekhniki v stroitel'stve.
Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam,
1959. 252 p. (MIRA 12:5)

1. Akademiya stroitel'stva i arkhitektury. Institut ekonomiki
stroitel'stva.

(Construction industry--Finance)

SOKOLOV, B.M., prof., doktor ekonom.nauk

Unfinished and extended building. Trudy MIEI no.14:463-470
'59. (MIRA 13:1)

1. Nauchno-issledovatel'skiy institut ekonomiki stroitel'stva
Akademii stroitel'stva i arkhitektury SSSR.
(Construction industry--Finance)

SOKOLOV, B.

Business accounting and legal relations in construction. Vop.
ekon. no.11:88-91 N '60. (MIRA 13:11)
(Construction industry--Finance) (Contracts)

SOKOLOV, Boris Mikhaylovich; PROFERANSOV, D.P., nauchnyy red.;
GYUNTER, A.R., red. izd-va; MIKHEYEVA, A.A., tekhn. red.

[Industrialization of construction] Industrializatsiia stroi-
tel'stva. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i
stroit. materialam, 1961. 35 p. (MIRA 15:3)
(Construction industry--Technological innovations)

LEVIN, G.I., kand.ekon.nauk; SOKOLOV, B.M., doktor ekon.nauk, prof.,
nauchnyy red.; GLAZUNOVA, Z.M., red.izd-va; NAUMOVA, G.D.,
tekhn.red.

[Determining specific capital investments in industrial
construction] Opređenje udel'nykh kapital'nykh vlozhenii
v promyshlennom stroitel'stve; nauchnoe soobshchenie. Moskva,
Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam,
1961. 45 p. (MIRA 15:4)
(Construction industry--Finance)

BEKRI, L.Ya., doktor ekon. nauk, prof.; MAKSIMOV, I.S.; BRAGINSKIY, B.I., kand. ekon. nauk, dots.; GERASHCHENKO, B.S., kand. ekon. nauk; GRIGOR'YEV, A.Ye., doktor ekon. nauk, prof.; ITIN, L.I., doktor ekon. nauk, prof.; LOKSHIN, E.Yu., doktor ekon. nauk, prof.; KAMENITSER, S.Ye., doktor ekon. nauk, prof.; OBLONSKIY, Ya.A., kand. ekon. nauk, dots.; SOKOLOV, B.M., doktor ekon.nauk, prof.; SHASS, M.Ye., doktor ekon.nauk; STEPANOV, A.Ya.; ULITSKIY, L.I., doktor ekon. nauk, prof.; PODGORNOVA, V., red.; TROYANOVSKAYA, N., tekhn. red.

[Economics of socialist industry; textbook] Ekonomika sotsialisticheskoi promyshlennosti; uchebnik. Pod red. L.I.Itina, B.S.Gerashchenko. 2., dop. i perer. izd. Moskva, Gospolitizdat, 1961. 775 p. (MIRA 15:10)

1. Moscow. Gosudarstvennyy ekonomicheskii institut. 2. Zaveduyushchiy kafedroy ekonomiki promyshlennosti Moskovskogo gosudarstvennogo ekonomicheskogo instituta (for Itin). (Russia--Industries)

MEL'NIKOV, Aleksandr Alekseyevich; SOKOLOV, B.M., otv. red.;
SKRIPKINA, Z.I., red.izd-va; ANOKHINA, M.G., tekhn. red.

[Effectiveness of concentrating and mechanizing the production
of building materials in Kirghizistan] Effektivnost' kontsentratsii i mekhanizatsii proizvodstva stroitel'nykh materialov v Kirgizii. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR, 1962. 166 p.
(MIR. 16:2)

(Kirghizistan--Building materials industry)

L 23491-66 ENT(1)

ACC NR: AP6007086

UR/0057/66/036/002/0349/0352

AUTHOR: Andreyev, S.I.; Sokolov, B.M.

ORG: None

TITLE: Investigation of the breakdown mechanism of a short air gap. 2.

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 349-352

TOPIC TAGS: spark discharge, spark gap, air, brass, steel, nanosecond pulse, electric discharge radiation, electric conductivity

ABSTRACT: The authors have investigated the breakdown of an 0.6 mm gap in air at atmospheric pressure between 1 mm radius hemispherical electrodes of brass (cathode) and steel (anode) by 4.6 kV pulses of 20 nanosec duration. The pulses were produced by demagnetization of ferrite rings, using a technique previously proposed by S.I.Andreyev, M.P.Vanyukov, and V.A.Serebryakov (PTE, No. 3, 89, 1962). The pulse height was so chosen that discharge did not occur every time the pulse was applied. The voltage across the gap and the current through it were recorded with an oscilloscope, and the spark was photographed with its own light. No radiation from the gap was observed when the discharge current was less than 1.5 A. A weak diffuse luminosity was apparent when the discharge current was about 2 A, and as the current increased from 2 to 4 A there appeared an approximately 65 micron diameter cathode spot and the luminous column increased in diameter toward the anode, where its diameter was sometimes as large as 150 mic-

Card 1/2

UDC: 537.523.4

L 23491-66

ACC NR: AP6007086

rons. When the diffuse luminosity was present the discharge current increased at the rate of approximately 10^9 A/sec and the conductivity of the column was about 1 mho/cm. A temporary decrease in the rate of decay of the voltage across the gap was observed when the diffuse radiation appeared. An energy of about 6×10^{-6} J was required to break down the gap, and a power of 2 kW was expended in the gap at the moment when the diffuse radiation appeared. Orig. art. has: 1 formula and 3 figures.

SUB CODE: 20/

SUBM DATE: 10 May 65/

ORIG REF: 006/

OTH REF: 002

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